

Career Changer's Guide to Computer Programming and Information Systems

*University of California, Irvine – Extension
Information Technologies Program*

Revised Version!

Introduction

You've seen all the newspaper and magazine articles talking about the shortage of Information Technologies workers and about the good salaries that come with IT positions. However, you've also seen technology stocks come crashing down and many companies "smart-sizing." Is now a good time for a career change into IT?

The answer is, of course, not so simple. However, it is important to remember several key points: the nation's economy always moves up and down over time, most well-established companies have not disappeared, and just about all companies can improve their bottom lines by adopting information technology solutions to streamline their business processes. This means opportunities for individuals knowledgeable in the right technologies. So, if you conclude that you would love working in a technology-oriented field, the answer is to go ahead and get the IT knowledge and make sure that your other transferable job skills (writing, public speaking, analytical thinking, organizational, time management, etc.) are in top form, as well.

Now that you've decided to make the move and explore getting into IT, where do you begin? This guide will help get you started.

There are basically four steps to the process:

1. Research: finding out what aspect of IT you like the most
2. Education: gaining the skills and knowledge necessary to do what you identified in step 1
3. More research: finding out where you can get a job doing what you identified in step 1
4. Getting an interview in the places you identified in step 3

Actually, there is an additional step: making a decision about which job to accept once you begin getting offers!

Tip for smart career changers: Nobody will do this for you; you have to take full responsibility for managing your own career change!

But don't get discouraged. Many people have made career changes into IT successfully. With the help of encouraging friends, relatives, or colleagues, you can maintain the motivation to see it through.

Let's take a closer look at each of the four steps listed above.

The Process

Step 1, Research: Finding out what aspect of IT you like the most.

Actually, your goal in making a career change is to *love* your new career! Why go through all the bother and expense if you end up being miserable in your new job? (The financial rewards better be very good to make up for unhappy days at work.)

So, the first step is to learn everything you can about computers and the Information Technology field, and in particular about the kinds of jobs that are available. For instance, IT involves disciplines like computer programming, database management, networking, Web page design, systems analysis and design, software testing, and quality assurance. Since most of us can't learn everything, it is imperative that you do some initial research to learn a little about all these areas and try to identify those areas that sound most interesting to you.

Tip for smart career changers: You have to go to the library, bookstore, or Internet to find the information; then be willing to spend some time on your own reading and learning.

Bookstores and the Internet are more likely to have up-to-date information, so try these two sources first. Any of the large bookstore chains have scores of books dedicated to every aspect of Information Technology, including books on career opportunities. Several titles appear in the bibliography at the end of this brochure.

If possible, seek friends, relatives, or acquaintances – *anyone* you can find – who works in IT. Ask them to describe their jobs and what they like or dislike about them.

Step 2, Education: gaining the skills and knowledge necessary to do what you identified in step 1

Most professional careers require formal training and an appropriate degree or certification. Fortunately for you, this is not necessarily so in the world of IT. In

fact, it may be possible to teach yourself all you need to know to land an IT job.

Tip for smart career changers: Most of us have a tough time sticking to a project that takes a long time to complete without some form of external support or encouragement.

Acquiring the IT skills needed to land a job takes time, study, and a good deal of effort. While some successful career changers are self-taught, most of us need a formalized structure and/or support system to stay on track. Enrolling in a college degree or certificate program can certainly serve this function.

Academic institutions usually do a good job steering students to the courses they need, but are not always as good at career counseling (unless they specifically feature this service). Consequently, you must identify the area of IT in which you are interested *before* approaching a learning institution for courses. One of the most frustrating experiences for academic administrators is when a potential student walks into the department office and says, "I hear I can make a lot of money in IT, what do I need to do to get a job like that?" Don't expect an education or training provider to tell you which career you should choose and then find a job for you, as well.

Once you have a good idea of what you want to study, it's important to find an education or training provider that can meet your educational objectives. This provides both opportunities and challenges. There are an exponentially increasing number of education and training providers in the IT market – each with different formats and programmatic content – so you need to identify the provider that suits your needs best in terms of quality, schedule of courses, cost, and respectability in the industry.

Step 3, More research: finding out where you can get a job doing what you identified in step 1

Now that you've identified what you love to do in the IT world and you've received the necessary education and training, it's time to find a job.

Tip for smart career changers: Finding a job is a full-time job in itself!

This short guide can give you only a brief introduction to this complex topic. Again, your research skills will prove invaluable. Take heart; depending on where you are in your career, many resources exist for helping you find that job.

During this process, it is important to carry out a self-evaluation so you can identify specifically your skills, credentials, experience, and so on. It is very im-

portant to remember that much of what makes or breaks your chances of landing a job doesn't involve your technical knowledge at all! It involves having good transferable skills including interpersonal skills, general business knowledge, communication skills, and creativity.

Once you have a good idea of what you can offer a potential employer in the way of both technical and transferable job skills, you need to get to work! Set a schedule for yourself including getting up in the morning at a regular time and having a planned set of activities each day that help move you toward finding the job. Now let's take a look at several resources that may help you in this quest:

The best (an possibly easiest) resource consists of your instructors and classmates (if you take courses to obtain your education and training). Your instructors are industry professionals and have "front-line" perspectives (and maybe jobs) to offer. Your classmates are also a good source of information because many of them are already employed in the industry and are in class because they need to sharpen their skills or acquire new ones in new technologies.

Next, don't overlook family and friends who may already be (or at least know of) potential employment opportunities. This should remind you of step 1. The same people that had information about the industry may have information about employment.

Another resource that is time-tested (but often disparaged) is the newspaper. The main problem is that when you see an advertisement, so do thousands of other individuals. You can expect to respond to hundreds of ads before receiving a response. It is critical to mail the highest quality résumé and cover letter, and then follow up with a telephone call. You need to make sure that you stand out among the hundreds (or thousands) of other respondents.

Along with the newspaper, the Internet provides a wealth of information about jobs - both on newspaper's Web sites as well as independent companies that list employment opportunities.

Of course, frequently overlooked job opportunities may be right where you are working currently! You may be able to stay with your current employer but make a transition to working with computers. There are advantages to this because you already speak the language of the business - a very attractive attribute in the eyes of a potential employer.

As a last resort, you might consider approaching a professional employment agency. A good agency not only can put you in contact with potential employers, but also can provide additional services, such as assistance with résumé writing, interview preparation, and negotiation skills for salaries and benefits.

Step 4, Getting an interview with the places you identified in step 3

The best way of getting an interview is through personal contacts (see step 3). Your first objective is to talk to an "insider" who works for the company in which you are interested and who can put you in contact with people who have the power to hire you. (You want to make sure that you talk to people who have the power to hire you, not representatives from human resources departments.) The next best approach is to submit an outstanding cover letter and résumé in response to a job listing in a newspaper or on the Internet. If the letter and résumé are of sufficiently high quality, you may land an interview. Many people do find jobs this way, but the "personal contact" approach is more likely to be successful. As a last resort, you might consider flooding the IT world with unsolicited copies of your résumé, but this is one of the least successful ways of finding a job.

For help preparing your cover letter and résumé, there are hundreds of books in print on this topic and we won't say more about it here.

Once you have been invited for an interview, there are several things that you absolutely must do in order to make a good impression. Briefly, they include:

1. Research the company thoroughly with a focus on understanding how to match what you can offer to their needs
2. Don't talk too much - keep the conversation balanced by allowing the interviewer time to have his or her say
3. Emphasize your good general work habits as much as your computer prowess
4. Never say unpleasant things about previous employers (no matter how much they abused you)
5. Send a thank-you note to anyone with whom you had contact regarding the interview: secretaries, assistants, and, of course, the interviewer!

Remember, potential employers are interested in knowing only five things. All the questions they ask will center on these five topics:

1. Why do you want to work here, rather than somewhere else?
2. What contributions can you make to my business (or department, or division)?
3. Can we get along with you and do you have the same values as our company? (two questions, but related)
4. What can you offer that the other hundred applicants for this position can't?
5. Can we afford to pay what you want?

Once you start getting offers, you need to evaluate each one as follows:

1. Do my skills really match the job?
2. Do I really want to work with these people?
3. Are the working amenities satisfactory (salary, benefits, working conditions, work tools, etc.)?

Salary negotiation is an interesting topic by itself and there are numerous books that provide some insights into how to make this process painless and truly win-win for both you and the employer.

A Few Words About Degrees, Certificates, and Certifications

What kind of *formal* evidence do you need of your knowledge? Most employers expect a college degree of some sort – preferably one in a technical field such as engineering, computer science, mathematics, or one of the physical sciences. Persons with a background in one of these areas have good analytical, creative, and logical thinking skills, which are very important in working with computers. If you also have a certificate in a specific technology such as computer programming or database technology from a recognized educational program, you're in pretty good shape!

If you have a non-technical degree (or no degree at all, other than a high school diploma), then it's definitely a good idea to get some additional training and receive a certificate from a recognized provider. This won't carry as much weight as a technical degree, but often companies are mainly interested in seeing that you have the ability to start something (like an educational program) and finish it. They want to see that you have self-discipline and perseverance. When trying to choose a certificate program, it is important to remember that not all of them were created equal. Some require a minimum number of hours of evaluated learning, such as those offered by U.C. Irvine Extension, which require at least 150 hours. (This means that you have to demonstrate what you learn via exams, projects, or other methods, and then be assigned a letter grade.) Other programs may offer fewer hours of instruction and may not grade students. Potential employers have more respect for graded, comprehensive programs than for those that are of shorter duration or in which instructors don't evaluate students' performance.

In addition to certificate programs, there is another kind of program that is popular: *vendor certification*. Many technology companies such as Microsoft and Cisco have created training and testing programs that culminate in certification on specific products or technologies. These certifications, of which Microsoft Certified Systems Engineer (MCSE) and Cisco Certified

Network Professional (CCNP) are two examples, represent a high level of technical expertise in Microsoft and Cisco products, respectively. Most companies today offer similar certifications. There are many persons without degrees beyond a high school diploma earning good salaries in IT because they have vendor certifications. In fact, some employers consider these certifications more valuable than a full-fledged engineering degree! However, be advised that you must possess the knowledge to carry out the work. Many employers are skeptical when they see a person with a vendor certification but with no degree, certificate or job history to prove their abilities. The best possible situation is to have both a technical degree *and* vendor certification(s). For more information, check out the Web sites of the companies in which you are interested and look for training/certification pages.

Regardless of the degree, certificate, certification, or whatever you have, there is no guarantee of automatic employment. It's up to you to go out and sell yourself! You must show potential employers that you have the knowledge and skills needed to help them be more successful. This means not only technical skills, but communications skills, people skills, and, perhaps most importantly, good old-fashioned common sense. The good news is that many people with all sorts of experience and educational backgrounds are out in the workforce working successfully in information systems careers.

Career Change Assistance from UCI Extension

UC Irvine Extension can provide career change assistance through the Women's Opportunities Center. These services are available to both men and women for a yearly membership fee of \$75 (financial assistance is available based on need). Services include

- ◆ Career Counseling
- ◆ Courses/Seminars/Workshops
- ◆ Networking
- ◆ Career/Education Resource Library
- ◆ Internet Access and Computer Use
- ◆ Job Listings

In addition, it is important to read as much as you can about the career change process and, specifically, about careers in information technology. The bibliography below lists four books that serve as a good starting point.

Once you have identified the particular area within information technology that is of greatest interest to you, you can begin taking courses from UCI Extension's Information Technologies Program. Quarterly catalogs providing complete program details are avail-

able from the Student Services office or you can try our new and improved Web site.

Bibliography

This short brochure barely scratches the surface of the career-changing process. Once again, it is critical that you carry out your own research. Here are several books about career changing, job-hunting, and the information technology field that provide many more details. Don't even think about starting your career change without consulting at least a couple of them

What Color is Your Parachute? 2001

Bolles, Richard Nelson

ISBN 1-58008-123-1

"This is an essential companion for any career-changer; nobody should even think about making a career change without reading this book!"

The Complete Idiot's Guide to a Career in Computer Programming

Liberty, Jesse

ISBN 0-7897-1995-9

"Despite the non-serious title, this book is quite good. It covers work environments, programming skills needed, salaries, and self-study approaches. It even gives a brief technical introduction to the various programming areas within information technology."

Opportunities in Computer Systems Careers (Software)

Burns, Julie

ISBN 0-8442-4599-2

"This book provides a good survey of the different types of jobs and careers in IT. The author discusses working in the computer industry, the differences between working as a consultant and working for someone else (ultimately, even consultants really work for someone else), education and training, and finding a job. The author also provides case studies highlighting several individuals' career paths."

Career Opportunities in Computers and Cyberspace

Henderson, Harry

ISBN 0-8160-3774-4

"This one has information about specific occupations, including salaries, skill requirements, and advancement opportunities. It also helps you find the best computer career to match your own interests."

Good luck!!!